

Notice of Allowability

Application No.

10/690,874

Examiner

Hai L. Nguyen

Applicant(s)

TSYRGANOVICH, ANATOLIY V.

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendments filed on 11/02/2005.
2. ☒ The allowed claim(s) is/are 4-7, 12, 13 and 21-27.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Response to Amendment

1. The amendment received on 11/02/2005 has been reviewed and considered with the following results:

As to the prior art rejections to the claims, Applicant's amendments have overcome the previous prior art rejections mailed on 8/23/2005, as such; the rejections have been withdrawn. Therefore, the case is found to be in allowance condition for the reasons as set for below. In view of the inclusion of all of the limitations of new added claims 21-27 within base claims 4 and 12, which have been indicated allowable in the office action mailed on 08/23/2005, therefore, claims 21-27 are also allowed.

REASON FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance:

Applicant has canceled all rejected claims presented in the previous Office Action mailed on 8/23/2005. As to pending claims of the application, the prior art of record fails to disclose or fairly suggest an microcontroller integrated circuit, as recited in claim 4, having specific structural limitations such as a frequency locked loop (340 in instant Fig. 4) further including a ramp generator (420), wherein the ramp generator starts a first ramp upon a first edge of the first signal (198), and wherein a first digital value indicative of a magnitude of the first ramp is determined upon a first edge of the second signal (196), and wherein the ramp generator starts a second ramp upon a second edge of the first signal, and wherein a second digital value indicative

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of a magnitude of the second ramp is determined upon a second edge of the second signal, the first and second digital values being used to generate a third digital value, the third digital value being supplied to the digital filter (460), and being configured in combination with the rest of the limitations of the base claims and any intervening claims.

The prior art of record fails to disclose or fairly suggest an microcontroller integrated circuit, as recited in claim 12, having specific structural limitations such as the clock multiplier circuit (as shown in Fig. 9) includes a control loop (607, 609), the control loop including an oscillator (607) and a loop divider (639), the loop divider being a counter that is preset with a preset value (651), and wherein a phase of the second signal (618) is adjusted with respect to the first signal (REF CLOCK) by changing the preset value; such as the preset value a digital six, loop divider 639 therefore counts from the preset value of six, seven, eight. When the loop divider 639 transitions the count state eight, the feedback clock (641) transitions high (as illustrated in Figure 10). Loop divider 639 continues to count the count state rolls over from the terminal count sixteen to the count value Upon entering count state zero, the feedback clock FEEDBACK CLOCK transitions as illustrated in Figure 10. Because the synchronization pulse SYNC PULSE generated from the reference clock, changing the preset value to which the loop divider is preset can change the time 652 between the rising edge of the feedback clock and the falling edge of the reference clock; and being configured in combination with the rest of the limitations of the base claims and any intervening claims.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

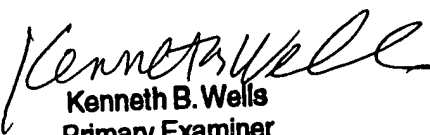
Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai L. Nguyen whose telephone number is 571-272-1747. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HLN 
November 13, 2005


Kenneth B. Wells
Primary Examiner